

SECRET

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NPIC/TSSG/DED-1165-68
5 April 1968

MEMORANDUM FOR: Chief, Development Engineering Division, NPIC/TSSG

SUBJECT : Illumination Required by the Human Eye

25X1 1. The recently distributed "Human Engineering Design Guide by the [] has proved quite valuable as a reference in evaluating the illumination system for the High Precision Stereo Comparator.

25X1 2. The [] specifications state that the Stereo Comparator will provide 0.2 stilbs at the operators eye under most conditions. In extreme cases such as looking at a step wedge and attempting to differentiate between 2.9 and 3.0 density film at 200X magnification, the illumination level will automatically be reduced to 0.026 stilbs to prevent damage to the film. Neither previously available reference material nor the past experience of the DED personnel could provide information to the effect that these illumination levels were adequate.

25X1 3. While reviewing the new [] Guide I found in Section 4 that 15 foot lamberts is adequate illumination level at the eye for young interpreters and 25 foot Lamberts adequate for the general interpretation population.

4. General Physics and Optics Books indicate that 1 stilb = 2919 foot Lamberts. Therefore, 0.2 stilbs is equal to 584 foot Lamberts and 0.026 stilbs = 90 foot Lamberts. Thus even at the worst condition the interpreter will have three to four times as much light as is required (90 f.l. as opposed to 15 or 25 f.l.).

5. This information then provided what I needed in setting up an acceptable specification with the Contractor.

[]

25X1

TSSG/DED

Distribution:

Orig - Addressee

2 - NPIC/TSSG/DED/R&DBII

Declass Review by NIMA/DOD

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GROUP 1
Excluded from automatic
downgrading and
declassification

25X1

CENTER ROUTING SLIP

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FROM		DATE		REMARKS
TO	INITIALS	DATE		
DIRECTOR				
DEP/DIRECTOR				
EXEC/DIRECTOR	2	4/9		
SPECIAL ASST	1	4/9		
ASST TO DIR				
ASST TO DEP/DIR				
CH/PPBS				
DEP CH/PPBS				
EO/PPBS				
CH/IEG				
DEP CH/IEG				
EO/IEG				
CH/PSG				
DEP CH/PSG				
EO/PSG				
CH/DBD/PSG				
CH/TSSG	3			
DEP CH/TSSG				
EO/TSSG				
DIR/IAS/DDI				
CH/DIA/XX4				
CH/DIA/AP-1P				
CH/SPAD				

8 Apr.

EHK - per our agreement - a sort of "progress report". I intend to see that you get more like this.

John:

To 3

Thanks. Pls be sure to send along the bad as well as the good!

55453

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